Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: we012 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: W.T. Ward Locality:

Date Desc.: Elevation: 22/03/87 175 metres Map Ref.: Sheet No.: 8737 N 1:50000 Rainfall: No Data Northing/Long.: 6657300 AMG zone: 55 Runoff: No Data 707100 Datum: AGD66 Easting/Lat.: Drainage: No Data

Geology

ExposureType: Undisturbed soil core Conf. Sub. is Parent. Mat.: No Data Substrate Material: No Data

**Land Form** 

Rel/Slope Class:No DataPattern Type:No DataMorph. Type:No DataRelief:No DataElem. Type:Terrace flatSlope Category:LevelSlope:0 %Aspect:No Data

Surface Soil Condition (dry): Surface crust, Recently cultivated

**Erosion:** 

**Soil Classification** 

Australian Soil Classification:Mapping Unit:N/AN/APrincipal Profile Form:N/AASC Confidence:Great Soil Group:Grey clay

Confidence level not specified

Site Disturbance: Cultivation. Rainfed

**Vegetation:** 

**Surface Coarse Fragments:** 

**Profile Morphology** 

Dark greyish brown (10YR4/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Light clay; Weak grade of structure, 10-20 mm, Angular blocky; Moderate grade of structure, <2 mm, Granular; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Calcarenite, coarse

fragments; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots;

A12 0.1 - 0.25 m Dark greyish brown (10YR4/2-Moist); ; Light clay; Weak grade of structure, 10-20 mm, Angular

blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Calcarenite, coarse

fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;

A13 0.25 - 0.7 m Dark greyish brown (10YR4/2-Moist); ; Light clay; Weak grade of structure, 10-20 mm, Angular

blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change

to -

2A1 0.7 - 1.1 m Very dark grey (10YR3/1-Moist); , 10YR43, 10-20% , 5-15mm, Distinct; Light medium clay;

Moderate grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Gypseous, Fine (0 - 2 mm), Crystals; Field pH 8.5 (pH meter);

Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

2B2 1.1 - 2.2 m Brown (7.5YR4/4-Moist); , 10YR31, 2-10% , 5-15mm, Distinct; Light medium clay; Moderate

grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very firm consistence: Field

pH 8.8 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -

2C 2.2 - 2.78 m Yellowish brown (10YR5/4-Moist); , 7.5YR44, 20-50% , 0-5mm, Prominent; , 7.5YR42, 2-10% ,

5-15mm, Distinct; Light medium clay; Weak grade of structure, 50-100 mm, Angular blocky; Massive grade of structure; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Field pH

9 (pH meter);

**Morphological Notes** 

0-70cm seems to be a relatively recent addition (?Pian) to a prior soil, possibly Q. The surface soil is rather moist and deformed by drilling; weak lenses could be present.

There is better structure and darker colour at 80cm. Note very fin

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e carbonate in topsoil, rounded. There are some large faunal channels. Gypsum is mostly at 90-100cm., soil carbonate in situ at 30-40 and 175-190 cm. Single slickenside

at 2m. C has remnants of depositional banding, 1mm thick, in packets.

## **Observation Notes**

Parent Rock: , , first terraced fan, Namoi

## **Site Notes**

Weak crust to coarse self-mulching. Soil very moist, strong brown colour showing to topsoil, probably low terrace. A clayier profile than at Edgeroi . A second hole on south side of Warrambool Creek, slightly lower, shows 15cm of light clay

Soil Studies in the Lower Namoi Valley EDGEROI Site ID: we012 CSIRO Division of Soils (QLD) Observation ID: 1

Project Name: Project Code: Agency Name:

## **Laboratory Test Results:**

Depth	рН	1:5 EC		angeable Ig	Cations K	E: Na	xchangeable Acidity	CEC	ECEC	ESP
m		dS/m		.9		Cmol (+)/				%
0 - 0.1 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.6										
Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density		icle Size	Analysis Silt Clay
m	%	%	mg/kg	%	%	%	Mg/m3	<b>.</b>	%	Ont Clay
0 - 0.1 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.6										
Depth	COLE		Gravimetric/Volumetric Water Contents						K sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar g/g	0.5 Bar J - m3/m3	1 Bar	5 Bar 15	Bar	mm/h	mm/h
0 - 0.1 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.6										

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**Laboratory Analyses Completed for this profile**